THE PLAGUE AT MARSEILLES CONSIDER'D:

With REMARKS upon the PLAGUE in General, ſhewing its Cauſe and Nature of INFECTION, with neceſſary Precautions to prevent the ſpreading of that DIREFUL DISTEMPER. Publiſh'd for the Preſervation of the People of *Great Britain*.

ALSO,

Some Obſervations taken from an Original Manuſcript of a Graduate Phyſician, who Reſided at *London* during the whole Time of the late Plague, *Anno* 1665.

By RIHARD BRADLEY F.R.S.

DUBLIN:

Printed by *J. Carſon*, for *Patrick Dugan*, on *Cork-Hill*, 1721.

BRITISH MUSEUM

TO

Sir *Iſaac Newton*,

Preſident of the Royal Society,

&c.

SIR,

TO Act under Your Influence, is to do Good, and to Study the Laws of Nature, is the Obligation I owe to the Royal Society, who have ſo wiſely placed Sir *Iſaac Newton* at their Head.

The

DEDICATION.

The following Piece, therefore, as I design it for the Publick Good naturally claims *Your* Patronage, and, as it depends chiefly upon Rules in Nature, I am doubly obliged to offer it to the Presi-dent of that Learned Assembly, whose Institution was for the Improvement of Natural Knowlege:

I am, Sir,

With due Respect,

Your most obliged,

Humble Servant,

183X59

R. BRADLEY.

PREFACE.

THERE *would be little Occaſion for a Preface to this Treatiſe, if the laſt Foreign Advices had not given us ſomething particular relating to the Peſtilence that now rages in the South Parts of* France, *and what may more particularly recommend theſe Relations to the World is, becauſe they come from Phyſicians, who reſided at the Infected Places.*

The Phyſicians at *Aix* give us the following Account.

The Contagious Diſtemper, which has become the Reproach of our Faculty here, for above a Month paſt, is more violent than that at Marſeilles; *it breaks out in Carbuncles, Buboes, livid Bliſters, and Purple Spots, the firſt Symptoms are grievous Pains in the Head, Conſternations, wild Looks, a trembling Voice, a cadaverous Face, a Coldneſs in all the exreme*

Parts,

PREFACE.

Parts, a low unequal Pulſe, great Pains in the Stomach, Reachings to Vomit, and theſe are follow'd with Sleepineſs, Deliriums, Convulſions, or Fluxes of Blood, the Forerunners of ſudden Death. In the Bodies that are opened, we find gangerous Inflamations in all the lower Parts of the Belly, Breaſt and Neck. Above Fifty Perſons have died every Day, for three Weeks paſt, in the Town and Hoſpitals. Moſt of them fall into dreadful a Phrenzy, ſo that we are forc'd to tie them.

The other is a Letter from a Phyſician at Marſeilles, *ſent to* John Wheake, *Eſq; who was ſo kind to give me the Abſtract.*

Marſeilles *Sept.* 15. 1720.

SIR,

I Arriv'd here the 8*th.* and enter'd the Gate of *Aix* which leads to the *Cours*, which has always been eſteem'd one of the moſt pleaſant Proſpects in the Kingdom, but that Day was a very diſmal Spectacle to me; all that great Place, both on the Right and Left, was fill'd with Dead, Sick, and Dying Perſons. The

Carts

Carts were continually employ'd in going and returning to carry away the Dead Carcaſes, of which there were that Day above four Thouſand. The Town was without Bread, without Wine, without Meat, without Medicines, and in General without any Succours.

The Father abandon'd the Child, and the Child the Father; the Husband the Wife, and the Wife the Husband; and thoſe who had not a Houſe to themſelves, lay upon Quilts in the Streets and Pavements, all the Streets were fill'd with Cloaths and Houſhold Goods, ſtrew'd with Dead Dogs and Cats, which made an inſuportable Stench. Meat was Sold at 18 to 20 *Sous per* Pound, and was only diſtributed to thoſe that had Billets from the Conſuls: This, Sir, was the miſerable State of this City at that Time, but at preſent, Things have a better appearance; Monſieur *le Marquis de Langeron*, who Commands here, has cauſed the Dead to be Buried, the Cloaths and Goods to be burnt, and the Shops to be open'd, for the Suſtenance of the Publick.

Two Hoſpitals are prepar'd where they carry all the Sick of the Town, good

Orders

PREFACE.

Orders are daily re-eſtabliſh'd, and the Obligation is chiefly owing to Monſieur *de Langeron*, who does Wonders. However, there is not any Divine Service Celebrated, nor are there any Confeſſors. The People die, and are buried without any Ceremonies of the Church; But the Biſhop, with an undaunted Courage, goes thro' the Streets, and into publick Places, accompanied with a Jeſuit and one Eccleſiaſtick, to Exhort the Dying, and to give them Abſolution; and he diſtributes his Charity very largely. The Religious Order have almoſt all periſh'd, and the Fathers of the Oratory are not exempt; it is accounted, that there have died 50000 Perſons. One thing very particular is, that Monſieur *Monſtier*, one of the Conſuls of the City, who has been continually on Horsback ordering the Slaves who carried away the Dead in Carts, or thoſe that were Sick to the Hoſpitals, enjoys his Health as well as he did the firſt Day he began; the Sickneſs ſeems at preſent to abate, and we have the Satisfaction to ſee ſeveral whom we took under our Care at the begining of the Sickneſs, promiſe fair towards a Recovery.

covery. The Sickneſs however, is of a very extraordinary Nature, and the Obſervations we have in our Authors, have ſcarce any Agreement with what we find in this: It is the Aſſiſtance of Heaven we ought to implore, and to wait for a Bleſſing from thence upon our Labours.

I am, &c.

We may obſerve, that the Contagion now ſpreading it ſelf in Foreign Parts, has nearly the ſame Symtoms that were obſerv'd in the late Plague at London; *ſo that what Medicines were then uſed with good Succeſs, may direct not only the People of* England *in the way of Practice, if* GOD ALMIGHTY *ſhould pleaſe to afflict us with that dreadful Diſtemper, but be ſerviceable likewiſe to the Infected Places abroad. There is room enough to hope, the approaching Cold, which we naturally expect at this Seaſon, may prevent its ſpreading amongſt us for ſome Months, 'till the Air begins to warm, but the Seeds of that Venom may be brought over in Merchandizes even in the coldeſt Months, and according to the Nature of Inſects will not hatch, or appear to our-*

PREFACE.

Prejudice, 'till the hotter Seaſons. For to ſuppoſe this Malignant Diſtemper is occaſion'd by Vapours only raiſing from the Earth, is to lay aſide our Reaſon, as I think I have already ſhewn in my New Emprovements of Planting, *&c. To which my Reader may refer.*

63Y59

THE

THE

PLAGUE

AT

MARSEILLES

CONSIDER'D, &c.

THE Deplorable Condition of the *Marſeillians*, and the Danger that all the Trading Parts of *Europe* are now in, of being Infected by the Plague which rages in the *South* Parts of *France*, and every Day ſpreads it ſelf more and more over the Neighbouring Countries, gives

gives me occaſion to publiſh ſome Papers which would never have otherwiſe appear'd in the World.

When I conſider the melancholy Circumſtances of the People of *Marſeilles* and other infected Places, how they are now diveſted of Relief, and brought into that miſerable State, that even every Man is terrified at the Approach of his deareſt Friend, and the very Aſpect of our Neighbours ſtrike ſuch Horror and Confuſion in us, as if they brought our Death and Deſtruction with them; it is then ſurely time for every one to contribute all that in him lies to prevent the Progreſs of ſo *direful a Calamity*.

The good Counſels of our Nation, therefore, to prevent as much as poſſible the Infection which might be brought among us by Merchandizes coming from Infected Places, have wiſely order'd ſtrict Quarantine to be perform'd, before either the Sailors or Goods can be brought a ſhoar.

The Neighbouring Nations of Trade, have follow'd our Example, but the *Hollanders* in an extraordinary manner, have even order'd the Burning the very Ships and Goods coming from *Marſeilles*, and have been ſo cautious, as to ſuffer none of the Paſſengers to come on Shoar, without firſt being diſ-rob'd of all their Apparel, and even to be well waſh'd with the Sea Water, and then likewiſe to perform Quarentine in a little Iſland, remote from the

Inhabitants,

Inhabitants, I could mention many Relations we have had, of the Sufferings of the poor People belonging to *Marſeilles*, who to avoid the diſmal Conſequences of the Plague, have flown for Refuge into the Country, and have either been ſtarv'd to Death, or Murder'd by the Country People ; but yet we find, that notwithſtanding all theſe Precautions, that Peſtilence continues to deſtroy as much as ever, and makes its advances every Day more and more towards us.

It is computed that about 60000 are Dead of the Plague at *Marſeilles*, and that there are not now (*October* 20. *N. S.*) above 14000 Perſons left in that Town, including 10000 Sick ; and at *Aubagne*, out of 10000 who retir'd thither from *Marſeilles*, above 9000 are Dead.

On this ſad Occaſion of the Ruin of *Marſeilles*, eſpecially ſince there is talk of Burning that Town, it may not be unſeaſonable to give an Account of it.

' *Marſeilles* is one of the moſt Conſiderable ' Cities in *France*, and the moſt populous ' and moſt trading Town in all *Provence*. It ' is ſo Ancient, that it is reckoned to have ' been Built upwards of ſix hundred and thirty ' Years before the Birth of our Saviour. It ' was once a very flouriſhing Republick; and ' its Univerſity was in ſuch Eſteem as drew ' Students thither from all parts of *Europe*.

' *Marſeilles*

'*Marſeilles* is ſituate at the Foot of a Hill,
'which riſes in the Form of an Amphitheatre
'in proportion to its Diſtance from the Sea.
'The Harbour is Oval, and bounded by a
'Key about fourteen hundred Paces long,
'upon which ſtand the handſomeſt Houſes in
'the Town. It affords a very delightful
'Walk, Part whereof is taken up in the Day-
'time by the Working Gally-Slaves Stalls,
'where you may furniſh your ſelf with
'Cloaths and other neceſſaries; the Entrance
'of the Harbour is ſhut up by a Chain ſup-
'ported at certain Diſtances by three Stone-
'Pillars; ſo that only one large Ship can paſs
'at a time, tho' the Haven will contain about
'Five hundred. And hither are brought all
'ſorts of Commodities from all Parts of the
'known World

'The Cathedral Church, call'd *Notre*
'*Dame la Majeure*, whereof S. *Lazarus* is Pa-
'tron, is very Solemn. It was formerly a
'Temple dedicated to *Venus*, or to *Diana* of
'*Epheſus*. Its Form is Irregular; but it was
'not thought proper to add or diminſh any
'Thing. There remain ſeveral large Col-
'lumns, on which ſtood the Idol. The
'Treaſure of this Church is very rich. Here
'you ſee the Head of S. *Lazarus*, that of S.
'*Cannut*, a Foot of S. *Victor*, and many other
'Rellicks. Near the Cathedral is a Chappel,
'built upon the Spot where (the *Marſeilli-*
'*ans* tell you) S. *Mary Magdalen* preach'd the

Goſpel

' Goſpel to the Idolaters as they cameout of
' the Temple.

' *Notre Dame des Acoules* is alſo a fine large
' Church, which was formerly a Temple ſa-
' cred to the Goddeſs *Pallas*. In that of S.
' *Martin*, which is Parochial, is preſerv'd a
' Silver Image of the bleſſed Virgin, five Foot
' and a half high, the Crown and Ornaments
' whereof are very rich. The Church of S.
' *Saviour*, now belonging to a Nunnery, was
' anciently a Temple of *Apollo*. All theſe
' Places are ſo many Proofs of the Antiqnity
' of *Marſeilles*, as well as two other Temples
' near the Port, with two Towers, *viz.* that
' of S. *John*, which is a Commandry of the
' Knights of *Malta*, and that of S. *Nicolas*.

' The Abby of S *Victor*, of the Order of
' S. *Benedict*, is ſituate at the Foot of the Ci-
' tadel. It reſembles a Caſtle, being encom-
' paſs'd with Walls, and ſet oft with Towers.
' At the Front of the Church are theſe Words
' addreſs'd to S. *Victor*.

Maſſiliam verè, Victor, civeſque tuere,

' In a Chappel on one ſide of the Epiſtle,
' youſee the Head of that Saint, in a Shrine
' of Silver guilt, finely Wrought, which was
' given by Pope *Urban* V. whoſe Tomb is on
' one ſide of the Choir. There are many o-
' ther Rellicks in this Church. You then de-
' ſcend a large Stair-Caſe into the Church un-

' der

'der Ground, where the Chappels visited by
'the Curious, are full of Holy Bodies.
'There they shew you the Tomb of S. *Euse-*
'*bius*, and those ot Forty five Virgins, who
'disfigured themselves to terrifie the Vandals
'who put them to Death. Here you see St.
'*Andrew*'s Cross entire, the Branches where-
'of are seven Foot long and eight Inches Dia-
'meter. In one of these Subterraneous Chap-
'pels is a little Grotto, wherein S. *Mary Mag-*
'*dalen*, (they tell you,) upon her Landing
'at *Marseilles* began to do Pennance. They
'add that she inhabited it six or seven Years:
'Her Statute likewise is represented, lying
'at the Entrance of this Grotto. There is al-
'so a rich Chappel of our Lady, wherein no
'Women are permitted to enter. This Order
'was made, upon the Vulgar Notion of a
'Queen's being struck Blind, who had the
'Temerity to venture into it.

'In *Marseilles* you observe likewise the Mo-
'nasteries and Churches of the *Carthusians*,
'the Monks of St. *Anthony*, the *Trinitarians*,
'*Jacobins*, *Augustins*, Barefooted *Augustins*,
'*Carmelites*, Barefoted *Carmelites*, *Cordeliers*,
'*Observatins*, *Servits*, *Minims*, *Capuchins*, *Re-*
'*collects*, *de la Mercy*, *Feuillans*, *Jesuits*, Fathers
'of the *Oratory* and of the *Mission*. There are
'also *Benedictine* Nuns, *Dominicans*, Nuns,
'of S. *Clare*, *Capuchins*, *Carmelites*, *Bernardines*,
'*Ursolins*, Nuns of the Visitation of Mercy,

'and

'and of the good Shepherd or Repentance;
'and a Commandry of *Malta*.

'The Citadel of *Marſeilles* is near the
'Port, extending its Fortifications to the En-
'trance of the ſame; and yet it commands
'the Town. The Key which lines this ſide
'of the Harbour, from Fort S. *Nicholas*, to
'the Arſenal, is about fifteen hundred Paces
'long, and is Adorned with handſome Ware-
'Houſes, and Dwelling-Houſes. Here is
'the great Hoſpital for Sick Slaves, which
'was formerly the Arſenal 'till the new one
'was built. Six large Pavilions, as many
'main Houſes, and a great Square Place, big
'enough to build ſeveral Galleys at a time in,
'form the Deſign of it. In this Place are
'two large Baſons, as long and as deep as a
'Galley, in each of which, when a Galley is
'ready to launch, they open a ſmall Sluice
'which kept up the Sea Water.

'This great Building makes one entire Front
'of the Port, three hundred Paces in length;
'the Harbour of *Marſeilles*, is thirteen hun-
'dred Paces long, and the Circumference a-
'bout three thouſand four hundred and fifty
'Paces. The Streets of the old Town are
'long but narrow; thoſe of the New are ſpa-
'cious and well Built. The Chief is that,
'they call *le Cours*, which is near Forty Paces
'broad, in the middle of Which is a Walk,
'planted with four Rows of young Elms,
'which with the Keys, are the Places of
'publick Reſort.

' The Town-Houſe which they call *La*
' *Loge*, is ſituate upon the Key over againſt
' the Galleys. Below is a large Hall, which
' ſerves the Merchants and Sea-faring Men
' for an Exchange; and above Stairs, the
' Conſuls, Town-Councellors, and others
' concerned in the Civil Adminiſtration have
' their Meeting. The moſt valuable Piece
' in this Building is the City-Arms in the
' Front, Carved by the famous *Puget*.

' *Marſeilles* ſeems ſtill to retain ſomewhat
' of the ancient Government of its Four Courts
' being divided into four Quarters, viz. S.
' *John*, *Cavaillon*, *Corps de ville*, and *Blancaire*;
' each of which hath its Governours and other
' Officers. The *Porte Royalle* is well Adorn-
' ed, having on one ſide the Figure of S. *La-*
' *zarus*, and on the other, that of S. *Victor*.
' And in the middle is a Buſto of *Lewis* XIV.
' with this Inſcription over it, *Sub cujus im-*
' *perio ſumma libertas*.

' The Town is encompaſs'd by good Walls
' and a Tetragon which commands a Part
' of it, is the beſt of the two Citadels, and
' within Cannon Shot of a Fort call'd *Notre*
' *Dame de la Garde*, whither the Inhabitants
' frequently go to pay their Devotion, and
' from whence they diſcover Ships at Sea at
' a great diſtance. This Fort is built on the
' top of a Mountain, upon the Ruins of an
' ancient Temple of *Venus*, called *Epheſi-*
' *um*.

The

The Country about this City is low and open for two Miles, agreeably Adorn'd with Villas, Vinyards, and Gardens of Fig-Trees and Orange-Trees, with plenty of Water from a good Spring, which being divided into ſeveral Branches ſerves to furniſh the City.

As to the Inhabitants, they are for the moſt part Poor and Uncleanly, and chiefly Eaters of Fruit, Herbs, and Roots with ſuch like Meagre Fare, nor do they take any Pains to clean the Streets where the meaner Sort have their Habitation. Their Bread is very Coarſe and high Priz'd; and perhaps what has principally Contributed to the Progreſs of the Plague among them, was the great Numbers of thoſe which Lodged together in the ſame Houſe, as I ſhall explain hereafter. When I have Examin'd the State of *London*, when it Suffer'd by the Plague in the Year 1665.

London at the time of the Plague, 1665 was, perhaps, as much crouded with People as I ſuppoſe *Marſeilles* to have been when the Plague begun; the Streets of *London* were in the Time of the Peſtilence very Narrow, and, as I am Inform'd, unpaved for the moſt Part; the Houſes by continu'd Jetts one Story above another, made them almoſt meet at the Garrets, ſo that the Air within the Streets was pent up, and had not a due Freedom of Paſſage, to purifie it ſelf as it ought;

ought; the Food of the People was then much leſs Invigorating than in theſe Days; Foreign Drugs were but little in Uſe, and even Canary Wine was the higheſt Cordial the People would Venture upon; for Brandy, ſome Spices, and hot Spirituous Liquors were then not in Faſhion; and at that time Sea-Coal was hardly in Uſe, but their firing was of Wood, and, for the moſt part, Cheſtnut, which was then the Cheif Furniture of the Woods about *London*, and in ſuch Quantity, that the greateſt Efforts were made by the Proprietors, to prevent the Importation of *Newcaſtle* Coal, which they repreſented an unwholſome Firing' but, I ſuppoſe, principaliy, becauſe it would hinder the Sale of their Wood; for the generality of Men were (I imagine) as they are now, more for their own Intereſt than for the Common Good.

The Year 1665 was the Laſt that we can ſay the Pague raged in *London*, which might happen from the Deſtruction of the City by Fire, the following Year 1666. and beſides the Deſtroying the Eggs, or Seeds, of thoſe Poiſonous Animals, that were then in the Stagnating Air, might likewiſe purifie that Air in ſuch a Manner, as to make it unfit for the Nouriſhment of others of the ſame Kind, which were Swimming or Driving in the Circumambient Air: And again, the Care that was taken to enlarge the Streets

at

at their Rebuilding, and the keeping them Clean after they were rebuilt, might greatly Contribute to preſerve the Town from Peſtelence ever ſince.

But it was not only in the Year 1665 that the Plague raged in *London*, we have Accounts in the Bills of Mortality, of that dreadful Diſtemper in the Years 1592, 1603, 1625, 1630 and 1636. in which Years we may obſerve how many dyed Weekly of the Plague and Remark how much more that Diſtemper raged in the hot Months, than in the others, and ſerve at the ſame time as a Memorandum to the Curious.

A *TABLE*

A *TABLE*, Shewing how many Died Weekly, as well of all Diſeaſes, as of the Plague, in the Years 1592, 1603, 1625, 1630, 1636; and the Year 1665.

Buried of all Diſeaſes in the Year 1592.

	Total	*Pla.*		*Total*	*Pla.*
March 17	230	3	Auguſt 11	1550	797
March 24	351	31	Auguſt 18	1532	651
March 31	219	29	Auguſt 25	1508	419
April 7	307	27	Septemb. 1	1490	507
April 14	203	33	Septemb. 8	1210	563
April 21	290	37	Septem. 15	621	451
April 28	310	41	Septem. 22	629	349
May 5	350	29	Septem. 29	450	330
May 12	329	38	October 6	408	327
May 19	300	42	October 13	522	323
May 26	450	58	October 20	330	308
June 2	410	62	October 27	320	302
June 9	441	81	Novemb. 3	310	301
June 16	399	99	Novem. 10	309	209
June 23	401	108	Novem. 17	301	107
June 30	850	118	Novem. 24	321	93
July 7	1440	927	Decemb. 1	349	94
July 14	1510	893	Decemb. 8	331	86
July 21	1491	258	Decem. 15	329	71
July 28	1507	852	Decem. 22	386	39
Auguſt 4	1502	983			

The Total of all that have been Buried is, 25886
Whereof of the Plague, 11503

Buried

Buried of all Diſeaſes in the Year 1603.

		Total	*Pla.*
March	17	108	3
	24	60	2
	31	78	6
April	7	66	4
	14	79	4
	21	98	8
	28	109	10
May	5	90	11
	12	112	18
	19	122	22
	26	122	32
June	2	114	30
	9	131	43
	15	144	59
	23	182	72
	30	267	158
July	7	445	263
	14	612	424
The Out-Pa-riſhes thi Week were joined with the City.			
July	21	118.	917
	28	172[illegible]	1396
Auguſt	4	225[illegible]	1922
	11	207[illegible]	1745
	18	305	2713
	25	853	2539
Septemb.	1	338[illegible]	3035
	8	3078	2724
	15	3129	2818
	22	2456	2195
	29	1961	1732
October	6	1831	1641
	13	1312	1149
	20	760	642
	27	625	508
Novemb.	3	737	594
	10	545	442
	17	384	251
	24	198	105
Decemb.	1	223	102
	8	163	55
	15	200	96
	22	168	74

The Total this Year is, 37294
Whereof of the Plague, 30561

But

Buried of all Diſeaſes in the Year 1625.

		Total	*Pla.*			*Total*	*Pla.*
March	17	262	4	Auguſt	11	855	4115
	24	226	8		18	5205	4463
	31	243	11		25	4841	4218
April	7	239	10	September	1	3897	3344
	14	256	24		8	3157	2550
	21	230	25		15	2148	1612
	28	305	20		22	1995	1551
May	5	292	30		29	1236	852
	12	232	45	October	6	833	538
	19	279	71		13	815	511
	26	401	78		20	651	331
June	2	395	69		27	375	134
	9	434	91	Novemb.	3	257	89
	16	510	161		10	319	92
	23	640	239		17	274	48
	30	942	390		24	231	27
July	7	1222	593	December	1	190	15
	14	1781	1004		8	181	15
	21	2850	1819		15	168	6
	28	3583	2471		22	157	1
Auguſt	4	4517	3659				

The Total this Year is,	51758
Whereof of the Plague,	35403

Buried

Buried of all Diſeaſes in the Year 1630.

		Total	*Pla.*			*Total*	*Pla.*
June	24	205	19		23	27-	57
July	1	209	25		30	269	56
	8	217	43	October	7	230	66
	15	250	50		14	261	73
	22	229	40		21	24-	60
	29	279	77		28	21-	54
Auguſt	5	250	56	November	4	24-	29
	12	246	65		11	21-	29
	19	269	54		18	20-	18
	26	270	67		25	22-	7
September	2	230	66	December	2	22-	20
	9	259	63		9	198	19
	16	264	68		16	212	5

Buried in the 97 Pariſhes within the Walls,	2696
Whereof of the Plague,	190
Buried in the 16 Pariſhes without the Walls	4813
Whereof of the Plague,	603
Buried in the 9 Out-Pariſhes in *Middleſex* and *Surrey*, and at the *Peſt-houſe*	3045
Whereof of the Plague,	524
Buried in *Weſtminſter*	566
Whereof of the Plague,	31
The Total of all the Burials this time,	10545
Whereof of the Plague,	1317

Buried of all Diſeaſes in the Year 1636.

		Total	*Pla.*
April	7	119	2
	14	205	4
This Week theſe Pariſhes were added: S. Margaret Weſtminſter, Lambeth *Pariſh, St.* Mary Newington, Redriff *Pariſh,* St. Mary Iſlington, Stepney, *and* Hackney *pariſhes*			
April	21	285	14
	28	259	17
May	5	251	10
	12	308	55
	19	299	35
	26	330	62
June	2	339	77
	9	345	87
	16	381	103
	23	304	79
	30	352	104
July	7	215	81
	14	372	104
	21	365	120
	28	423	151
Auguſt	4	491	206
	11	538	283
	18	638	321
	25	787	429
Septemb.	1	1011	638
	8	1069	650
	15	1306	865
	22	1229	775
	29	1403	928
October	6	1405	921
	13	1302	792
	20	1002	555
	27	900	458
Novemb.	3	1300	838
	10	1104	715
	17	950	573
	24	857	476
Decemb.	1	614	321
	8	459	167
	15	385	85

The Total of the Burials this Year, is 23359
Whereof of the Plague, 10400

Buried

Buried of all Diſeaſes in the Year $166\frac{4}{5}$.

		Tot.	*Pla.*
Decem.	27	[illegible]	1
January	3	34	
	10	39	
	17	43	
	24	47	
	31	40	
February	7	39	
	14	461	1
	21	39	
	28	39	
March	7	44	
	14	43	
	21	365	
	28	353	
April	4	344	
	11	382	
	18	344	
	25	390	2
May	2	388	
	9	347	9
	16	353	3
	23	385	14
	30	499	17
June	6	405	43

		Total	*Pla.*
June	13	558	112
	20	611	168
	27	684	267
July	1	1006	470
	14	1268	725
	18	1761	1089
	25	2785	1845
Auguſt	1	3014	2010
	8	4030	2817
	15	5319	3880
	22	5568	4227
	29	7496	6102
Septemb.	5	8252	6978
	12	7690	6544
	19	8297	7165
	26	5460	5533
October	3		
	10		
	17		
	24		
	31		
Novemb.	7		
	14		

We

We may obſerve from hence, that the Months *July*, *Auguſt*, *September*, and *October*, the Plague was at the greateſt height, and even in thoſe Months, all other Diſtempers had greater Power over Human Bodies than in others. When I conſider this, I cannot help taking Notice, that in thoſe Months we have our chief Fruit Seaſons, and when it happens that there has been a Blight in the Spring, or the Summer has not given our Fruit due Maturity, I ſuppoſe that the Habit of the Body is ſo diſpoſed as, to receive Infection more readily than in Years that either afford us little, or elſe very Ripe Fruit.

Again, in thoſe warm Months, I find that we have vaſt Varieties of the ſmaller kinds of Inſects floating in the Air, and it is a thing conſtant, that every Inſect from the greateſt to the ſmalleſt has its proper *Nidus* to hatch and perfect it ſelf in, and is led thither by certain Effluvia which ariſe from that Body which is in a right State for the preſervation of it. In the Blight of Trees we find, ſuch Inſects as are appointed to deſtroy a Cherry Tree, will not injure a Tree of another Kind, and again, unleſs the Leaves of ſome Trees are bruiſed by Hail, or otherwiſe Diſtemper'd, no Inſect will invade them; ſo in Animals it may be, that by ill Diet the Habit of their Body, may be ſo altered, that their very Breath may entice thoſe poiſonous Inſects to follow their way, 'till they can lodge themſelves in the Stomach

of

of the Animal, and thereby occaſion Death. We may likewiſe ſuppoſe that where theſe Inſects have met with their appointed Neſts, they will certainly lay their Eggs there, which the Breath of the diſeaſed Perſon will fling out in Parcels, as he has occaſion to Reſpire; ſo that the Infection may be communicated to a ſtander by, or elſe, through their extraordinary ſmallneſs, may be convey'd by the Air to ſome Diſtance.

It is obſervable, that all Inſects are ſo much quicker in paſſing through their ſeveral Stages to the ſtate of Perfection, as they are ſmaller and the ſmalleſt of them are more numerous in their Increaſe than the others.

Two Years ago when the Plague was at *Amiens*, I paſs'd by that Place, and then found the Contagion began to abate ('twas then about *October*, and the Rains began to fall the People told me they were adviſed to eat Garlick every Morning to guard their Stomachs againſt Infection; but whether it was the Garlick, or the ſudden alteration of the Seaſon that was the occaſion of the decreaſe of that Diſtemper, we ſhall examine in another Place, but we may Note, That all the Ground about that City is a Moraſs, ſo that there is no coming near it but by the Roads, which are Paved and mark'd out. This Marſh or Moraſs, as all others do in the Summer Seaſon, produce vaſt Numbers of Inſects which are accounted unwholſome, but as ſome are of Opinion, it is rather a Noxious Vapour which

occaſions

occaſions this Infectious Diſtemper, I ſhall mention my Opinion of ſuch Vapours before I conclude.

In the Philoſophical Tranſactions, No 8. *we have the following Obſervations of Inſects which are the Deſtroyers of Plants.*

‘ Some Years ſince there was ſuch a ſwarm ‘ of a certain ſort of Inſects, in *New-England*, ‘ that for the ſpace of 200 Miles, they poiſoned ‘ and deſtroyed all the Trees of the Country ; ‘ there being found innumerable little Holes in ‘ the Ground, out of which thoſe Inſects broke ‘ forth in the Form of *Maggots*, which turn'd ‘ into *Flies* that had a kind of ſting, which ‘ they ſtruck into the Tree and thereby enve- ‘ nom'd and killed it.

‘ The like Plague is ſaid to happen frequent- ‘ ly in the Country of the *Coſſacks* or *Ukrani*, ‘ where, in dry Summers, they are infected ‘ with ſuch ſwarms of *Locuſts* driven thi- ‘ ther by an *Eaſt*, or *South-Eaſt* Wind, ‘ that they darken the Air in the faireſt ‘ Weather, and devour all the Corn of that ‘ Country laying their Eggs in Autumn, and ‘ then dying; but the Eggs, of which every ‘ one layeth two or three Hundred hatching the next Spring, produce again ſuch a number of *Locuſts*, that then they do far more Miſchief then before, unleſs Rains fall, which kill both Eggs and Inſects, or unleſs a ſtrong *North*, or *North-Weſt* Wind ariſe, which drives them into

' into the *Euxin* Sea:" And it is very natural to ſuppoſe, that if the Winds have this Power ove the larger ſort of Inſects, *i. e.* of moving them from one Country to another, the ſmaller kinds, which are lighter than the Air it ſelf, may be interceptibly Convey'd as fat as the Winds can reach.

Dr. Wincler, *Chief Phyſician of the Prince* Palatine, *gives us the following Account of the* Murrain *in* Switzerland, *and the Method of its Cure, in a Letter to Dr.* Slare, *F. R. S. Anno* 1682.

' On the Borders of *Italy* a *Murrain* infected
' the Cattle which ſpread farther into *Switzer-*
' *land*, the Territories of *Wirtemburg*, and over
' other Provinces, and made great deſtruction
' amongſt them. The Contagion ſeem'd to
' propagate it ſelf in the form of a *Blue Miſt*,
' that fell upon thoſe Paſtures where the Cattle
' Grazed, inſomuch that Herds have returned
' home Sick, being very dull, forbearing their
' Food, moſt of them would die away in twen-
' ty four Hours. Upon diſſections were diſ-
' covered large and corrupted Spleens, ſphace-
' lous and corroded Tongues, ſome had *Angina*
' *Maligna*'s. Thoſe Perſons that careleſly ma-
' naged there Cattle without a due reſpect to
' their own Health, were themſelves Infected
' and Died away like their Beaſts.

' Having had timely Notice of this *Lues*
' from our Neighbours, we made ſuch Proviſi-

on

' on againſt the invading Diſeaſe, that very
' few of thoſe Who were infected by the Mur-
' rain died. Some impute this Contagion to
' the Witch-craft of three *Capuchins* in *Switzer-*
' *land.* But the more learned believe it to
' proceed from ſome *noxious Exhalations* thrown
' out of the Earth by three diſtinct Earth-
' quakes perceived here and in our Neighbour-
' hood in the Space of one Year.

The *Method of Cure for the Cattle.*

' As ſoon as ever there was any ſuſpition
' of the Contagion upon any one of the Herd,
' the Tongue of that Beaſt was carefully ex-
' amined, and in caſe they found any Aptha or
' Bliſters whether White, Yellow, or Black,
' then they were obliged to rub, and ſcratch,
' the Tongue with a Silver Inſtrument (being
' about the breath and thickneſs of a Six-Pence,
' but indented on the ſides, and having a Hole
' in the middle whereby it is faſtened to a
' Stick, or Handle,) 'till it Bleed, then they
' muſt wipe away the Blood with new un-
' waſhen Linnen. This done, a Lotion for
' the Tongue is uſed, made of *Salt* and good
' *Vinegar.*

' The *Antidote* for the the diſeaſed Cattle, is
' thus deſcribed.

' Take of *Soot*, *Gunpowder*, *Brimſtone Salt*,
' equal Parts, and as much Water as is neceſ-

' ſary

'ſary to waſh it down, give a large Spoon-
'ful for a Doſe.

After which we have a further Account of the ſame Contagion by the ſame Hand.

'------ I lately received an Account of two
'ingenious Travellers, who aſſured me, the
'Contagion had reached their Quarters on the
'Borders of *Poland*, having paſſed quite
'through *Germany*, and that the Method u-
'ſed in our Relation, preſerved and cured
'their Cattle. They told me the Contagion
'was obleved to make its Progreſs Dayly,
'ſpreading near two *German* Miles in twen-
'ty four Hours. This they ſay was certainly
'obſerved by many curious Perſons, that it
'continually, without intermiſſion, made pro-
'greſſive Voyages, and ſuffered no neighbour-
'ing Pariſh to eſcape; ſo that it did not at
'the ſame time infect Places at great diſtances.
'They added, that Cattle ſecured at Rack
'and Manger, were equally infected with
'thoſe in the Field. It were worth the con-
'ſidering, whether this Infection is not car-
'ried on by ſome volatile Inſect, that is able
'to make only ſuch ſhort flights as may a-
'mount to ſuch Computations: For the
'account of the Ancients concerning the grand
'*peſtilential Contagions*, is very little ſatisfac-
'tory to this Age, who derive it from a blind
'Putrefaction, from the incantations of ill

' Men or from the conjunction of inauſpicu-
' ous Planets.

The following Account we have from Dr. *Bernard Rammazzini*, concerning the Contagion among the Black Cattle about *Padua*, Tranſlated from *Acta Erudit.*

' In the Year 1712 a dreadful and violent
' Contagion ſeiz'd the *Black Cattle*, which
' like an increaſing Fire, could neither be ex-
' tingiſh'd nor ſtopt by any Human means.
' This Firſt was obſerv'd in *Agro Vincenti-*
' *no*, and Diſcover'd it ſelf more openly in the
' Country, ſpreading every way, even to the
' very Suburbs of *Padua*, with a cruel De-
' ſtruction of the Cows and Oxen, It was
' alſo in *Germany*, in many Places; and is not
' yet wholly conquer'd.
' Of this Diſtemper, Dr. *Ramazzini*, made
' a particular Diſſertation; in which he inqui-
' red into the Cauſes of the Diſtemper, and
' what Remedies might be us'd, to put a ſtop
' to its violent Courſe.
' It is evident that this Diſtemper in Cows
' and Oxen, was a true Fever, from the
' coldneſs of the Cattle at firſt, which was
' ſoon ſucceeded by a violent burning, with
' a quick Pulſe. That this Fever was peſti-
' lential, its concomitant Symptoms plainly
' ſhow, as difficulty of Breathing, a Drow-
' zineſs at the beginning; a continued Flux

' of

‘ of a nauſeous Matter from the Noſe and
‘ Mouth, fetid Dung, ſometimes with Blood,
‘ Puſtules breaking out over the whole Body
‘ on the fifth or ſixth Day, like the *Small-*
‘ *Pox*; they generally dyed about the fifth
‘ or ſeventh Day.

‘ The Author tells us that out of a great
‘ Drove, ſuch as the Merchants bring yearly
‘ into *Italy* out of *Dalmatia* and the bordering
‘ Countries, one Beaſt happen'd to ſtraggle
‘ from the reſt, and be left behind; which
‘ a Cowherd brought to a Farm belonging to
‘ the Count *Borromeo*: This Beaſt infected
‘ all the Cows and Oxen of the Place where
‘ he was taken in, with the ſame Diſtemper
‘ he labour'd under; the Beaſt it ſelf dying
‘ in a few Days, as did all the reſt, except
‘ one only, who had a Rowel put into his
‘ Neck.

‘ 'Tis no ſtrange thing therefore, if from
‘ the Effluvia, proceeding from the ſick and
‘ dead Cattle, and from the Cow-Houſes and
‘ Paſtures where they were fed, and perhaps
‘ from the Cloaths of the Cowherds them-
‘ ſelves, this Infection falling upon a proper
‘ Subject, ſhould diffuſe it ſelf ſo largely.
‘ When therefore this ſubtile *venemous Exha-*
‘ *lation* happens to meet with any of the Cow
‘ kind, joyning it ſelf with the ſeſerous Juices
‘ and Animal Spirits, 'tis no wonder it ſhould
‘ diſorder the natural Conſiſtence of the Blood,
‘ and corrupt the Ferments of the Viſcera;

‘ whence

'whence it follows that the natural Functions 'of the Viſera are vitiated, and the requiſite 'Secretions ſtop'd. For

'Dr. *Ramazzini* not only ſuppoſes, but 'aſſerts, that a Poiſon of this kind, rather fixes 'and coagulates, than diſſolves the Blood: 'For beſide the formentioned Symptoms ac-'companying the Diſeaſe, the Eye it ſelf is a 'Witneſs; ſince the dead Carcaſes being open-'ed while they are yet hot, little or no Blood 'runs out; thoſe Animals having naturally 'a thick Blood, eſpecially when the Fever has 'continued ſo many Days. And he adds, 'that whether this Plague came firſt from the 'Foreign Beaſt, or any other way, it only 'had its Effect upon ſome Animal, in which 'there was the morbid Seminary or Ground 'prepared for it.

'In the dead Bodies of all the Cattle, it was 'particularly Obſerv'd, that in the Omaſus 'or Punch, there was found a hard compact 'Body, firmly adhereing to the Coats of the 'Ventricle, of a large Bulk, and an intolera-'ble Smell: In other Parts, as in the Brain, 'Lungs, &c. were ſeveral Hydatides, and large 'Bladders fill'd only with Wind, which be-'ing open'd, gave a diſagreeable Stink: there 'were alſo Ulcers at the Root of the Tongue, 'and Bladders fill'd with a Serum on the ſides 'of it. This hard and compact Body, like 'Chalk, in the Omaſus, the Author takes 'to be the firſt Product of the contagions

'Miaſma.

' Miaſma. He adds a Prognoſtick, believing ' that from ſo many Attempts and Experi- ' ments, and the Method obſerv'd in the Cure ' of this Venom, at laſt a true and ſpecifick ' Remedy will be found out to extirpate the ' poiſonous Maglinity wholly: He alſo ex- ' pects ſome mitigation of it, from the ap- ' proaching Winter and North Winds. He ' does not think this Contagion can Effect Hu- ' man Bodies, ſince even other Species of ru- ' minating Animals, ſymbolizing with the ' Cow-kind, are yet untouch'd by it; nor ' was the Infection taken by the Air, after ' the dead Bodies had been carefully Bury- ' ed.

' As for the Cure of it: From the Chi- ' rurgical part, he commends *Bleeding*, burn- ' ing on both ſides the Neck with a broad red- ' hot Iron, making Holes in the Ears with a ' round Iron, and putting the Root Helle- ' bore in the Hole, a *Rowel* or *Seton* under ' the *Chin* in the *Dew-laps*; he alſo orders ' the *Tongue* and *Palate* to be often waſh'd and ' rub'd with *Vinegar* and *Salt*.

' He recommends the Uſe of *Alexipharmicks*, ' and ſpecifick Cordials; and three Ounces ' of Jeſuits Bark, infus'd in ten or twelve Pints ' of Cordial Water or ſmall Wine, to be given ' in four or five Doſes; which is to be done ' in the beginning of the Fever, when the ' Beaſt begins to be Sick. Or elſe two Drams ' of *Sperma Cæti* diſolv'd in warm Wine. A-

' gain

gain he preſcibes *Antimonium Diaphoreticum.*
‘ Againſt Worms breeding, an Infuſion of
‘ Quickſilver, or *Petroleum* and Milk is to be
‘ given. And laſtly, as to the Food, he directs
‘ Drinks made with Barley or Wheat Flower
‘ or Bread, like a *Ptiſane*, freſh ſweet Hay
‘ made in *May*, and macerated in fair Weather.
‘ In the mean time the Cattle muſt be kept
‘ in a warm Place, and Cloath'd, daily making
‘ Fumigations in the Cow-Houſes with Juni-
‘ per Berries Galbanum, and the like. As to
‘ Prevention, he enjoyns Care in cleaning the
‘ Stalls, and ſcraping the Cruſt off from the
‘ Wall; Care alſo is to be taken of their Food, the
‘ Hay and Straw not ſpoil'd by Rain in the
‘ Making, and he judges their Food ought
‘ to be but ſpairing : He likewiſe recom-
‘ mends currying, with a Comb and Bruſh ;
‘ with Setons under their Chin, made with
‘ a hot Iron run through the Part, and kept
‘ open with a Rope put through it.

After which we have the Receipt : Or the Ingredients of a Medicine for the ſpeedy Cure of that mortal Diſtemper amongſt Cows ; ſent over from *Holland*, where a like Diſtemper raged among the Black Cattle.

‘ *Recipe Veronicæ, Pulmonariæ, Hyſſopi, Scordii,*
‘ *ana M* iv. *Rad. Ariſtolohiæ rotundæ, Gentia-*
‘ *næ, Angelicæ, Petaſitidis, Tormentillæ, Carlinæ,*
‘ *ana unc.* 12. *Bac. Lauri & Juniperi, ana unc.*
‘ 12. *Miſc. fiat Pulvis.*

‘ Bleed

' Bleed the Cow, and give her 3 or 4 Morn-
' ing ſucceſſively, an Ounce of this Powder
' with a Horn, in warm Beer.

' If the Cow continues Diſtemper'd after
' the Omiſſion 2 or 3 Days, repeat the Medi-
' cine for 3 or 4 Days again.

I cannot help taking Notice likewiſe of the raging Diſtemper which was among the Cows about *London*, *Anno* 1714. It was ſo Violent and Infectious, that if *one* had it, all others that came within Scent of her or even eat where ſhe Grazed, was ſurely infected; it ſeized their Heads, and was attended with running at the Noſe, and a very naueſous Breath, which killed them in three or four Days. The Herdſmen would not allow it to be the *Murrain*, nor could give any Account from whence it did proceed; or could find out any Remedy againſt it; they only tell us the unuſual dry Summer, and the continued *Eaſt*-Winds, were the occaſion of it. This Diſtemper had been for two orthree Years before it came to us, in *Lumbardy*, *Holland*, and *Hamborgh*, to the Loſs almoſt of all their Cattle. The States of *Holland* cauſed a Medecine to be publiſhed for the Good of thoſe who had their Cattle thus Diſtemper'd, but having ben try'd here, 'twold not Cure one in ſeven, but rather increaſed the Infection by keeping the diſtemperd Cattle longer alive (by ſome Days) than they would have been without it. 'Tis remarkable

markable, that no Oxen had this Diſtemper but only *Milch-Cows*, which were more tender than the *Males*. The Herſdmen to keep their Cattle from the Infection, let them Blood in the Tail, and rubb'd their Noſes and Chaps with *Tar*; and when any happened to die of it, they were burnt and Buried deep under Ground. It began at *Iſlington*, ſpreading it ſelf over many Places in *Middleſex* and in *Eſſex*, but did not reach ſo far *Weſtward* from *London* as twenty Miles.

The moſt general Opinion concerning the Cauſe of this Diſtemper, was, that the Cattle were firſt infected by drinking ſome unwholſome ſtanding Water, where 'tis probable ſome Poiſonous Inſects were lodged and bred; the Summer having been extreamly dry, attended almoſt conſtantly with *Eaſterly* Winds, the Graſs almoſt burnt up, and the Herbs of the Gardens deſtroyed by Inſects; but ſuch as they were, (unfit for Table Uſe) were given to the Cattle. There was likewiſe ſo great want of Water, that many were forced to drive their Cows five or ſix Miles to it.

The Electuary publiſh'd upon this Occaſion by the States of *Holland*, was compos'd of moſt, if not all the Druggs uſed in the moſt ſerviceable Medicines that were made uſe of againſt the Plague among Men: moſt of which Ingredients we know to be Mortal to Inſects, as ſtrong ſcented Roots and Herbs; but

but above all, Aromatick Gums and Saps of Plants; as Rhue, Garlick, Pitch, Tar, Frankinſenſe and Olibanum. Theſe Ingredients are much uſed in *France* and *Italy* to prevent or deſtroy Infection, by burning them and ſmoaking ſuch Bodies, Letters, or any other things as are brought from infected Places, after they have made *Quarentine*, and are not ſuffered to come on Shore 'till they have undergone this Operation.

It is not againſt Experience, that Inſects can live and encreaſe in Animal Bodies: How often do we find Men, Women and Children troubled with Worms? What varieties of thoſe Inſects are often voided by them? And how ſhould that be, if they were not either ſuck'd into the Stomach with the Breath, or taken into it with ſome unwholſome Food? For they cannot breed in ſuch Bodies from nothing, without either their Eggs or themſelves are brought thither by ſome Accident: For if they were the Natural Produce of Animal Bodies, they would then be alike common to all, which we know they are not.

I have been informed, that in the Year 1714, when this Mortality among the Cows was at its height, that towards the End of the Summer, ſome Farmers brought in freſh Cattle, and turning them into the ſame Fields, where many Cows had died before, they took the Infection and died likewiſe; but the following Spring, thoſe Fields were void of

Infection, and the *Cows* that were put into them did very well, but what were then put into the *Cow-Houſes*, where the ſick *Cows* had been the Year before, were ſeiz'd with the Diſtemper, and died; which ſeems to inform us, that it was the Effect of *Inſects*, which thro' the Warmth of thoſe Stalls were preſerv'd from the Severity of the Winter's Froſt; but ſuch as were left in the open Fields, were deſtroy'd by the Cold. I have heard that a Woman about *Camberwell* cured Six in Seven of her *Cows*, by giving them once a Week, an infuſion of *Rhue* and *Ale-wort*.

But it may be ask'd, why theſe infectious Diſtempers, ſubject to Men, Cattle and Plants, are not univerſal? And why the Plague ſhould not be as well in *India*, *China*, the South parts of *Africa* and *America*, as in theſe parts of the World? (For I do not find it has ever been in thoſe Places.) This Query gives me a farther Opportunity to ſuggeſt, that Inſects are the Cauſe of it, and that they are brought with the Eaſterly Winds. In the firſt place, ſo far as I can learn, there is not naturally in *America* any one Kind of Creature or Inſect that is found in any other Part of the World, and the Plants likewiſe are all different from thoſe of other Countries; as it is the ſame in *India*, *China*, &c. whoſe Products are quite different from what we find elſewhere. Suppoſing then that theſe peſtiferous Inſects are only the Produce of

Tartary,

Tartary, let us conſider to what Parts of the World they may be carry'd from thence with the Eaſterly Winds; and whether *India*, *China*, the South of *Africa* and *America*, are not beyond their Reach, or can reaſonably be affected by them.

Whoever conſiders the Diſpoſition of the Land and Water in the Globe, may thus account for the Paſſage of theſe Inſects, with an Eaſterly Wind from *Tartary*, to all the Parts of *Europe*, *Aſia-Minor*, *Paleſtine*, *Barbary*, and other South Coaſts of the *Mediterranean Sea*, whether, 'tis highly probable, they may come, without meeting any thing in their Way to obſtruct their Courſe.

The beſt Maps do not lay down any Mountains of Note between *Tartary* and the places which have been Subject to the Plague: The *Alps* run parrallel with rhe Winds coming from *Tartary*, and therefore does not any Way hinder their Paſſage: The Mountains of *Dalmatia* are not high enough to prevent the Paſſage; or if they were, the *Caſpian Sea* is ſufficientiy large to let them pais to the South Parts of *Europe*, the *Mediterranean Sea*, and the North Coaſts of *Africa*, even to their moſt Weſtern Bounds.

Now it may be expected, perhaps, by ſome, that theſe Winds ſhould continue their Progreſs as far as *America*; but as yet, ſo far as I can learn, theſe Land-Winds, when they

they have blown with the greateſt Force, and have been of the longeſt Continuance, have not reach'd farther than about three hundred Leagues beyond the Weſtern Coaſts of *Europe*, which is a Trifle in Compariſon of the vaſt Ocean between Us and *America:* Beſides, it is my Opinion, that the Winds which blow over ſo vaſt a Tract of Land, as theſe *Tartarian* Winds muſt do, that I ſuppoſe convey and ſupport the peſtiferous Inſects, are of ſo different a Nature from the Winds coming from the Ocean, that 'tis likely thoſe Creatures which would ſubſiſt in the one, would be deſtroy'd by the other: So that if I am right in this Conjecture, *America* cannot be ſubject to the Plague.

Mount-Atlas, which is a vaſt Ridge of Mountains, running from the Ocean almoſt as far as *Egypt*, and are back'd with the Deſarts of *Lybia*, may very likely obſtruct the Paſſage of theſe Inſects to the South of *Africa*; and for that Reaſon, perhaps, ſecure that part of the World from Plagues. So likewiſe *Mount-Caucaſus*, or *Ararat*, which is one of the higheſt Ridge of Mountains in the World, running from Eaſt to Weſt, thro' *Perſia* and *India*, may ſecure the South Parts of thoſe Countries from the Plague, by ſtopping the Paſſage of thoſe infectious Creatures, if any Winds from *Tartary* ſhould happen to blow them that way: And as *China* lies to the Eaſt of *Tartary*, ſo it muſt be Weſterly Winds

which

which muſt infect that Country with the Plague, if it proceeds from what I imagine: But we do not find that Weſterly Winds are frequent in thoſe Parts; or if they are, we may be aſſur'd they cannot blow at the ſame time when the Inſects are hatch'd and carried the contrary way by the Wind from *Tartary*. We are inform'd, that upon the Coaſt of *China*, the Winds are ſo regular, that from *October* to *March* they coutinually blow from the North-Eaſt, and from that Month to *October*, the direct contrary way.

And Plants are no leſs ſubject to be deſtroy'd by Inſects, than Men and Quadrupedes, as I have explain'd in the Chapter of Blights, in my *New Improvements of Planting and Gardening*.

Plants of all Degrees are ſubject to Blights, which are ſo variouſly communicated to them, that ſometimes a whole Tree will periſh by that Diſtemper; now and then a few Leaves, or Bloſſoms only, and perhaps a Branch or two, will be ſhrivel'd, or ſcorch'd by it, and the reſt remain green and flouriſhing. I have yet never obſerv'd this Diſeaſe to happen among Plants, but upon the blowing of ſharp and and clear *Eaſterly* Winds, which are moſt frequent in *England* about *March*; but ſometimes happen in other Months. It is very obſervable, that the *Caterpillers* generally attend theſe Winds chiefly infecting ſome one ſort of Tree more than another, and even then not every where

where upon the kind of Tree they attack, but ſome particular Branches only; from which Obſervations I think we may draw the following Inferences, either that the Eggs of thoſe Inſects are brought to us by the *Eaſterly* Winds, or that the Temperature of the Air, when the *Eaſterly* Winds blow, is neceſſary to hatch thoſe Creatures, ſuppoſing their Eggs were already laid upon thoſe infected Parts of the Trees the preceding Year.

The Blights which are attended with large *Worms* or *Caterpillers*, ſeem'd to be rather hatch'd with the *Eaſt* Wind, than that the Eggs of thoſe Creatures are brought along with it; but thoſe Blights which produce only thoſe ſmall Inſects which occaſion the curling of the Leaves of Trees, may produce from Swarms of them, either hatch'd or in the Egg, which are brought with the Wind.

Some perhaps may Object, that the *Eaſt* Wind is too cold to hatch thoſe Creatures; how comes it then that we find them hatch'd when thoſe Winds reign? Or is it reaſonable to conjecture that the ſame degree of Heat is neceſſary to enliven an Inſect as is required to hatch the Egg of a Pullet? The Inſects of *Norway*, *Ireland*, and ſuch like cold Climes, muſt certainly have leſs Heat to produce them, than Creatures of the ſame Race muſt neceſſarily have in thoſe Climates which lye nearer to the Sun. Every Creature, without doubt requires a different Period of Heat or Cold to

enliven

enliven it, and put it in Motion, which is prov'd by ſo many known Inſtances, that I conceive there is no room for any Diſpute upon that ſcore.

But there may yet be another Queſtion, *viz.* Whether it is not the *Eaſt* Wind of it ſelf that Blights, without the help of *Inſects*? But that may be eaſily reſolved on my ſide; for that if it was the Wind alone that blighted, then every Plant in its way muſt unavoidably be infected with its Poiſon; whereas we find the contrary on a ſingle Branch it may be, or ſome other diſtinct Part of Plants.

And again, to ſhew how reaſonable we may conjecture that 'tis *Inſects* which thus infect the Trees, let us only conſider, that every *Inſect* has its proper *Plant*, or Tribe of *Plants*, which it naturally requires for its Nouriſhment, and will feed upon no other kind whatſoever: Therefore 'tis no wonder to ſee one particular ſort of Tree blighted, when all others eſcape; as for Example, that Wind which brings or hatches the *Caterpillers* upon the *Apple-Trees*, will not any ways infect the *Pear*, *Plumb*, or *Cherry* with *Blights*, becauſe, were the Shoals of *Inſects* natural to the *Apple*, to light only upon thoſe other Trees mentioned, they would then want their proper Matrix to hatch in; or if they were hatch'd already, they would Periſh for want of their natural Food, ſo that 'tis morally impoſſible that all ſorts of Trees ſhould be blighted

ted at the ſame time, unleſs the Eggs of every kind of *Inſect*, natural to each Tree, could be brought at one time with the Wind, or that an Eaſterly Wind could contain in it at once, as many differing Periods of Cold or Heat, as would be requir'd to hatch and maintain each differing kind of thoſe Creatures.

The common People in the Country ſeem to be of my Opinion, that Blights are brought by the Eaſt Winds, which they are ſo well ſatisfied brings or hatches the *Caterpiller*, that to prevent the too great Progreſs of Blights, it is common for them when the Eaſt Winds blow, to provide large heaps of Weeds, Chaff, and other cumbuſtible Matter on the Wind-ſide of their Orchards, and ſet them on Fire, that the Smook may poiſon either the *Inſects* or their Eggs, as they are paſs'd along. By this Contrivance I have often known large Orchards preſerv'd, when the neighbouring Parts have ſuffer'd to the Loſs of all their Fruit.

And I have alſo ſeen theſe Fires made with good Succeſs to deſtroy the *Catepillars*, even after they were hatch'd, and had began to devour the Trees, by ſuffocating them, and forcing them to drop to the Ground where they have been ſwept up in large Quantities, and kill'd. I have heard it affirm'd by a Gentleman of Reputation, that *Pepper-Duſt*, being powder'd upon the *Bloſſoms* of any Tree, will preſerve them from Blights, which may be, becauſe *Pepper* is ſaid to be preſent Death

to

to every Creature but to Mankind. now altho' this laſt Secret is too coſtly for common Uſe, yet it may be of Service in ſome particular Place, for the Tryal of a new Tree, where a Taſte of the Fruit is deſired, and beſides it helps to inform us. that Blights are occaſion d by Inſects, or their Eggs, lo ging upon a Plant, and that Pepper-Duſt will not ſuffer them either to live, or to be hatch d.

Another Remark (which to me is Demonſtration) that Blights proceed from Inſects, or their Eggs (being brought with the Eaſterly Winds) was the total Deſtruction of the Turneps, *Ann* 1716, on the Weſt ſide of *London*; about *October* we had dry Eaſterly Winds for a Week or ten Days, and ſeveral thouſand Acres of Turneps, which were then well grown, turnd Yellow and decay d, unleſs in ſuch Places only as were ſhelter'd by Hedges, Houſes. or Trees, where they remain'd Green till the Inſects, which came with the Wind in abont a Week's Time, deſtroy d thoſe alſo. Some Farmers imagin d that the Birds which were there in great Flocks. had eaten the Leaves of the Turneps, and contriv'd all Means poſſible to deſtroy them, 'till I convinc'd them that the Birds were rather Friends than Enemies, and came there too feed upon the *Caterpillers*, which were in ſuch great Numbers, that each Turnep-plant had no leſs than a Thouſand upon it: and that Inſects frequently paſs in Clouds and numberleſs Armies after this manner, is plain from ſeveral Inſtances, which have happen'd in my Time, and one of them (I think in *June*, *Ann.* 1717.) paſſing over *London* were ſuffoccated, (I ſuppoſe) with the Smoak of the Sea-Coal, and drop'd down in the Streets, inſomuch that a ſquare Court belonging to the *Royal Society* was almoſt cover'd with them; theſe were of the *Fly Kind*, and fully perfected.

It may be ask'd perhaps how theſe *Inſects* came to deſtroy the *Turneps* only, and not to touch the other Greens of the Fields, as *Cabbages*, *Carrots*, *Parſnips*, and the like? Every Herb has its peculiar *Inſect*, like the Trees I have mention'd: Nay more than this, the *Inſects* which Nature hath deſign'd to prey upon the Flower of a Plant will not eat the Leaves or any other part of the ſame Plant. The Leaves of Plants have

their *Insects* natural to them, the Bark and Wood likewise have their respective Devourers; and those several *Insects* have other Kinds, which lay their Eggs, and feed upon them.

I could yet give a much larger Account of Animals and Plants, how they have been particularly Infected, but I rather choose to refer my Reader to the Chapter at large, of *Blights* and *Plagues*, in my *New Improvements of Planting and Gardening*, &c.

By the foregoing Accounts we may observe, that *Mankind*, *Quadrupedes* and *Plants* seem to be Infected in the same manner, by unwholsome *Insects*; only allowing this difference, that the same *Insect* which is poi onous to Man, is not so to other Animals or Plants, and so on the contrary, we may observe likewise that Pepper which is of Use to Mankind, is poisonous to other Creatures, and tho' a Man cannot eat of the *Cicuta* or *Hemlock*, without prejudice, yet a Cow and some other Animals will eat it to their Advantage, and the *Manchanese* Apple, which is deadly Poison to almost every Creature is eaten greedily by Goats, and which is strange, the Milk of those Goats is wholsome to Mankind. Again we may remark that *Camphire* which may be taken at the Mouth by theHuman Race, and is helpful in many Cases, will destroy *Insects*; for among the Curious who have Cabinets of Rarities, it is a common Practice to lay it in their Drawers and Cases to destroy the smaller kind of *Insects*, which would otherwise devour their Collect ons.

The Smoaking of Tobacco is helpful to some Constitutions, but was the pure Leaf to be taken directly into the Stomach, it would purge in a violent Manner, and the Oil of it as I am told, is a deadly Poison; however it is to be remark'd, That in the Time of the last Plague in *London*, *Ann.* 1665, that Distemper did not reach those who smoak'd Tobacco every Day, but particularly it was judg'd the best to smoak in a Morning. We have an Account of a famous Physitian, who in the Pestliential time took everyMorning a Cordial to guard his Stomach, and after that a Pipe or two before he went to visit his Patients; at the same time we are told, he had an Issue in his Arm, by which, when it begun to smart, he knew he had receiv'd

some

ſome infection, (as he ſays) and then had recourſe to his Cordial and his Pipe, by this means only he preſerved himſelf, as ſeveral others did at that time by the ſame Method. I ſuppoſe therefore, that the Smoak of Tobacco is noxious to theſe Venemous *Inſects*, which I believe to be the cauſe of the Plague, either by mixing it ſelf with the Air and there deſtroying them, or elſe by provoking the Stomach to diſcharge it ſelf of thoſe Morbid Juices which would nourish and encourage them.

When I conſider that the dead Bodies of the miſerable People of *Marſeilles* were found full of *Inſects*, and that thoſe Worms could be no way ſo ſuddenly killed, as by putting Oil or Lemmon Juice upon them, it brings to my Mind ſeveral Tryals I have made upon *Inſects* of various Kinds, in order to occaſion their ſpeedy Death. In theſe Experiments, I found that moſt of the larger Kinds would live ſome Minutes in Spirit of Wine and other ſpirituous Liquors, when they were forced into them, and that Oil immediately ſuffocated them, from whence I ſuppoſe, the Air, or Breath they draw is exceeding fine and ſubtil, and that a thick Air conſiſts of too groſs parts for them to breath, and that ſince Oil deſtroys the larger Kinds of them immediately, the Oleagenous Particles evaporating from ſuch Bodies as Oil, Pitch, Tar, &c. expanding themſelves, and mixing with the common Air, would render it too thick for the ſmaller Kinds to ſubſiſt in.

We obſerve likewiſe that all *Aromatick Herbs* &c. were found uſeful in the time of the dreadful Peſtilence in 1665, which helps to confirm what I have juſt now related, for a ſingle Leaf of Roſamary contains at leaſt 500 little Bladders of Oily Juice which by rubbing, break and afford that grateful Smell we find in that Plant, but in that as in all other *Aromatick Herbs*, was we to bruiſe the Leaves 'till all thoſe Bladders were broken, the recreating Smell would be loſt, and we ſhould find only remaining an earthy, diſagreeable Flavour, ariſing from the common undigeſted Sap; ſo if we take the Leaves of Fifty ſeveral Kinds of Aromatick Plants, and after bruſing them, make up diſtinctly the bruis'd Leaves of each into Balls, and dry them by the Sun, or otherwiſe,

they

they all afford the ſame Smell ; for the breaking of thoſe Bladders or Bliſters, which yield the different Smells (from the Eſſence they ſeverally contain) makes them loſe all their Spirit or Eſſence.

In the Culture of theſe Aromatick Herbs, ſuch as *Roſemary*, *Lavander*, *Thyme* &c. we may remark, that they are never deſtroy'd by any *Inſect* which may ſtill give us a further Proof of the Antipathy all *Inſects* have to them, for which Reaſon ſome People are uſed to moak their Houſes with theſe Aromatick Herbs, but eſpecially where the Chambers or Rooms are ſmall and cloſe ; and it has been proved, that the Burning of Aromatick Gums and Woods, have likewiſe been uſeful in purifying the Air in a Houſe, and preventing the ſpreading of Peſtilential Diſtempers.

In 1665 it was obſervable, that in *Aldermanbury*, and other Places where there were large Ware-Houſes of Aromatick Druggs, the Infection did not reach ; ſo that it ſeems where there is Quantity enough of ſuch Woods or Gums, as yield a ſtrong Smell, we have no Occaſion of burning them, the bare Effluvia riſing from a large Maſs, baving the ſame Effect as burning a ſmall Quantity, As every one of theſe Druggs or Gums, is more pungent or operative upon the Organs of Smelling, ſo we may be aſſured, the Vapour proceeding from them fill a larger Space in the Air ; but perhaps a Tun weight of the Strongeſt Aromatick among them, in the Body or Maſs, will not purifie ſo much Air as half an Ounce of the ſame will do by Burning ; for the Smoak of a few Grains of *Tobacco*, when the Air is clear, will ſenſibly touch the Smell above forty Yards, tho' a Pound of the Herb unburnt will not affect the Smell above a Foot,

Theſe obſervations may ſerve to inform us, that the burning of Aromaticks may help to keep the Air in an healthful State; but as men of Buſineſs muſt often change their Station, and paſs thro' different Degrees and Tempers of Air, it is for that Reaſon, that Aromaticks, and ſtrong ſmelling Roots, Herb, &c. are recommended to be taken into the Stomach. The Cordial which we call *Plague-Water*, compos'd of Aromatick Herbs, has been uſed with Succeſs, as has alſo been Conſerves of *Rhue*, &c. and the uſe of *Gar-*

lic

ſick in the *Amiens* Diſtemper, particularly, is remarkable. To this I may likewiſe add a Relation I had lately from ſome Men of Quality concerning a *Plague*, which ſome Years ſince deſtroy'd a great part of the *French* Army: It was obſervable, that at that Time the *Iriſh* Regiment in that Service were preſerv'd by rubbing their Bread every Morning with *Garlick*, which undoubtedly muſt taint their Breath for many Hours, and ſo regulate the Air about them, that the unwholſome *Inſects* could not approach them.

Upon this occaſion, I cannot omit obſerving the extraordinary Remedy for deſtroying the Inſect call'd the *Wevil* in Corn or Malt, as it was Communicated to me by the Learned Dr. *Bentley*, Maſter of Trinity College, *Cambridge*; that Worthy Gentleman tells me, that the Herb *Parietaria*, or *Peletory of the Wall*, is a Sovereign Remedy againſt the *Wevil* in Corn or Malt, and according to the Information he has had, an Handful of that Plant being laid here and there in a Grainary Infected by thoſe Inſects, will infallibly deſtroy them in a Day or two; which Diſcovery is ſo uſeful that I think it ought to be made as publick as poſſible, and in this place ſerves to confirm my Hypotheſis, that the Effluvia of ſome Plants are Deſtructive to Inſects.

In the next place, I come to conſider, how much a certain Quantity of Air is requiſite to preſerve a ſingle Animal Body; and the Knowledge of that, is what I account one of the chief Preſervatives of Health, I have often been Concern'd to find a Family of ſix or ſeven pinn'd up in a Room, that has not contain'd Air enough for the Maintenance of Health in one ſingle Perſon; but ſuch is the Hardſhip of our Poor in many Places, and is frequently the Occaſion of their Death.

We may eaſily conceive how this happens, if we examine the Caſe of the Diving Tub, how ſhort a while a Man can live in it, without a ſupply of freſh Air; the Occaſion of which is, that when he has drawn in with his Breath, all the Groſſer Parts from the Air enclos'd in the Tub, the reſt grows hot and ſuffocating, by being too much rarifyed.

From whence I ſuppoſe, a Room of Nine or Ten Foot Cube, will contain Air enough to keep a ſingle Man

Man alive for one Day, but if two were to inhabit that Space for the ſame time, each would receive but half his Nouriſhment, and ſo both would be Sufferers; but a Room, perhaps, containing twice that Space, might well enough ſerve five People for a Day, ſuppoſing that all External Air was kept from Communication with ſuch a Room, during the time the People were in it; for, as I have obſerv'd, that Air has certain Nouriſhing Qualities in it, for the Maintenance of Humane Life; ſo when thoſe Nouriſhing Parts are imbibed, and drawn in by the Lungs, the Air is return'd and flung out as invalid, and cannot be of Uſe a ſecond Time to the ſame Perſon; an Example of which, we find very curiouſly demonſtrated by Mr. *Newyentyte*; he tells us, that in making this Experiment, he diſcover'd that the ſame Nouriſhing Quality in the Air, which is neceſſary to maintain Humane Life, is alſo neceſſary to maintain Flame, which he proves thus:

A lighted Candle being ſet under a Bell, cloſely fix'd upon a Table, will burn perhaps a Minute or two in proportion to the Quantity of Air pent up with the Candle in the Bell; but as ſoon as the Quantity in that Air, which is neceſſary to feed the Flame, is exhauſted, the Candle goes out? this bas been often try'd with the ſame Succeſs; and we find, that by letting into the Bell ſome freſh Air, a little before the Candle ſhould have gone out, it will ſtill continue burning: And then to ſhew that this Quality in the Air is the ſame which feeds the Life in Humane Bodies, it was try'd, whether the Air, returning from the Lungs, would not have the ſame Effect upon the Candle, as the External Air had before, but it had not, the Candle went out at its uſual Time: Thus, it ſeems, when we ſuck in Air for Breath, the Lungs takes what is neceſſary for the Nouriſhment of our Bodies, and returns back the reſt.

After this we may naturally conclude, that where the Rooms, or Houſes are ſmall, there ought to be frequent Admiſſions of the External Air, but eſpecially where thoſe Rooms or Houſes are too much crouded with People, and if it is ſuppoſ'd that the External

Air

Air is Infectious, the burning of *Aromaticks*, *Gums*, or *Herbs*, upon the letting in of fresh Air, is necessary.

From the foregoing Observations we may learn, that all Pestilential Distempers, whether in Animals or Plants are occasion'd by poisonous Insects convey'd from Place to Place by the Air, and that by uncleanly Living and poor Diet, Humane, and other Bodies are disposed to receive such *Insects* into the Stomach and most noble Parts, while, on the other Hand, such Bodies as are in full Strength, and are well guarded with Aromaticks, would resist and drive them away, but chiefly how necessary it is to allow the Body a Freedom of Air, and how to correct it if it is Infected.

And I shall conclude with some Memorandums taken from the Papers of a learned Genleman, who in the time of the late Plagne in *London* was curious enough to make his Remarks upon the Signs of that Distemper, and the Method of its Cure.

He tells the Plague proceeds first from a Corrupted and unwholsome Air.

The Second, is putrified Humours, hot Blood, caused by breathing in such corrupt Air; and if the Diet before were perverse, it fills the Body with superfluous Humours.

Concerning the common Fear of Infection, which makes many rich Men, which might and ought to maintain poor visited People; and some Physicians likewise, whose Duty it is to administer Physick to them, flee away, so that in time of great Infection we hear more cry out for want of Bread and necessary means, than for anguish of the Disease.

Hence also came that inhumane Custom of shutting up of Houses that are visited with Pestilence, dejecting their Spirits, and consequently making way for the Disease, and taking Men from their Labour, which is a digester of Humours, and a preserver of Health; and if the Disease be Infectious (as in their Opinion it is) it is plain Murder, to shut Men up in an infected and destroying Air.

But all Mens Bodies are not full of Humours; if they were, all would be infected.

After this I find the following Directions to prevent Infection. *First*, To avoid the Fear of it, and support

the

the Spirits in the next place. *Secondly*, To keep the Body soluble, and to use the Juice of Lemons often. *Thirdly*, He recommends a Diet of quick Digestion, and to eat and drink moderately: He prescribes likewise the smell of Aromaticks, such as *Camphire*, *Styrax*, *Calamites*, Wood of *Aloes*, &c. and to be taken inwardly, *Mithridate*, *Angelica*, and *Petasetis*-Roots, and, in an express Manner, he recommends Cleanliness, and the choice of a clear Air.

After Infection he tells us the Signs are, an extraordinary inward Heat; a Difficulty of Breathing, a pain and heaviness in the Head, an Inclination to Sleep, frequent Vomiting, immoderate Thirst, a Dryness on the Tongue and Palate; but especially if we discover Risings or Swellings behind the Ears, in the Groin, or other tender parts of the Body; but this last, where it happens, is of Advantage to the Patient; for he says, in such a Case, the Plague is rarely Mortal, for then Nature has power to dispel the Venom, and drive it from the most noble Parts; and then he recommends Bleeding; but if Spots appear upon the Body, he advises the Use of *Emeticks*, and afterwards *Sudorificks*, which by his Papers, we find he gave with good Success, but he decries the Use of Opiats at the beginning of the Distemper.

He concludes with Directing of proper Cordials, to refresh and strengthen the Patient, such as *Confect. Hyacint. Confect. Alchermes Pulv. Gasconiæ*, *Bezoar Orient.* and such like.

But my worthy Friend, Sir *John Colebatch*, who has in other Cases declared himself for publick Good, has, in this, likewise been careful to provide against the Infection, and especially recommends to his Friends, to collect large parcels of the ripe *Ivy Berries* which are known from the others by their Blackness.

Thus have I given my Readers such a Vein of the *Plague* in general, as may point out to him its natural Cause, Progress of Infection, and the Methods that have been used by the Learned, to prevent the spreading that Terrible Distemper.

FINIS.